2/24/94

PROPOSED
GROUND-WATER MANAGEMENT PLAN
FOR
PAHVANT VALLEY

BACKGROUND

During the past two years the State Engineer has been reviewing the ground-water resources in Pahvant Valley. As part of this process a number of public meetings have been held with the water users to present information and receive input. To better manage and administer the ground-water system in the Valley the State Engineer is proposing to implement a ground-water management plan. The plan sets forth the guidelines of how the resource will be administered in the future.

In conjunction with the Division of Water Rights, the U.S. Geological Survey conducted a study of the ground-water resources in Pahvant Valley . The study covered the period of time up to 1987, and the report entitled "Ground-Water Hydrology of Pahvant Valley and Adjacent Areas, Utah" was published in 1990. The State Engineer has used the data and information contained in this report and the ground-water model developed as part of the study to define the extent and characteristics of the ground-water system in the valley.

The total annual recharge to the ground-water system in Pahvant Valley is estimated to be about 65,000 acre-feet annually. Current discharge is over 100,000 acre-feet per year, of which 80,000 acre-feet is withdrawals from wells (1988-92 average). The State Engineer believes there is a significant overdraft in the valley. This is also reflected in the long-term water levels of wells. Based upon these and other factors, the State Engineer believes the ground-water system needs to be managed to bring the discharge in line with the average recharge.

A review of the irrigated acreage in Pahvant Valley indicates that of the total 44,800 acres, about ~~8,800~~ 7400 ? acres are being irrigated without a valid or properly recorded water right. This issue is very serious and will be addressed first to see if, by eliminating the illegal acreage, the well withdrawals can be reduced.

Water users have pointed out that there are a number of uncontrolled flowing wells and they believe they should be controlled or plugged. These wells generally flow during the winter months, and as the large pumping wells are started in the spring they cease flowing.

The quality of the ground-water in the Southwest portion of the valley has declined significantly. This is of concern and will continue to be monitored. If it is determined that ground-water withdrawals are unreasonably affecting the water quality, then withdrawals may need to be reduced.

The State Engineer is aware of the ramifications of the actions he is proposing under this management plan. In addressing the overdraft problem, we want to take into account the needs and opinions of the local water users and, at the same time, manage the ground-water resource on a long-term safe yield basis. Before any water user who has obeyed the law is denied water, we want to take all appropriate measures to insure that no water user is diverting and using more water than is approved under their water right.

The proposed ground-water management plan has a number of different elements, and it is proposed to implement these elements in phases. Future actions will be determined by the success of each phase. The initial phase deals with eliminating any irrigated acreage which does not have a water right, and controlling wasting wells. The second phase proposes hiring a water commissioner and metering the withdrawals from wells. If necessary, the final phase would be limiting withdrawals by distributing water based upon priority.

MANAGEMENT PLAN

1. Appropriation of Water - The valley is closed to all new applications to appropriate water.

2. Volume of Withdrawals - The Pahvant Valley ground-water system shall be managed so that the long-term average discharge does not exceed the long-term safe yield. The withdrawals from wells shall not exceed 60,000 acre-feet per year, as measured over a five year running average.

3. Ground-water Districts - Management of the valley has been based upon six ground-water districts since about 1965. It appears this approach has worked adequately to distribute the well withdrawals somewhat evenly over the entire basin. It is proposed the valley be divided in five management areas, similar to the previous districts. See attached map.

4. Change Applications - Change applications will be considered and evaluated on their own individual merits. Change applications which propose to transfer water from one management area to another will not be allowed. In filing proof of change on applications which transfer irrigation water rights, the proof shall clearly identify those lands taken out of production.

5. Survey of Irrigated Acreage - The State Engineer will conduct a survey of irrigated acreage to determine lands being irrigated without a valid water right. If lands are suspected of being in violation, a warning letter will be sent to the owner and/or operator requesting consultation. If a violation is determined, the owner and/or operator will be notified immediately to remove the land from production or secure a valid water right for said land. If compliance is not attained, legal proceedings will be initiated in the district court.

6. Wasting Wells - All flowing wells are required to have a control device installed or be sealed within two years.

7. Water Commissioner and Metering - If withdrawals are not reduced to the 60,000 acre-feet level, as a result of actions taken under paragraphs 5 and 6 above, then a water commissioner will be appointed and all wells diverting more than 10 acre-feet per year will be required to install pitot access tubes (These pitot access tubes will allow the discharge from the well to be measured using a manometer). Water users will be requested to release their power records and the water commissioner will make periodic flow measurements. With this data, the volume of water withdrawn will be calculated. Any water user not willing to release their power records will be required to install and maintain a flow meter capable of measuring both the instantaneous flow and the volume of water withdrawn. The water commissioner will prepare an annual report and submit it to the water users and State Engineer outlining the ground-water use in the valley.

8. Distribution of Water - If it becomes necessary to administer the water rights to meet the withdrawal limit, the water commissioner will be instructed to distribute the water based upon priority. In achieving the withdrawal limit set forth in paragraph 1 above, any reductions will be implemented over several years to allow water users reasonable time to make operational and financial adjustments.

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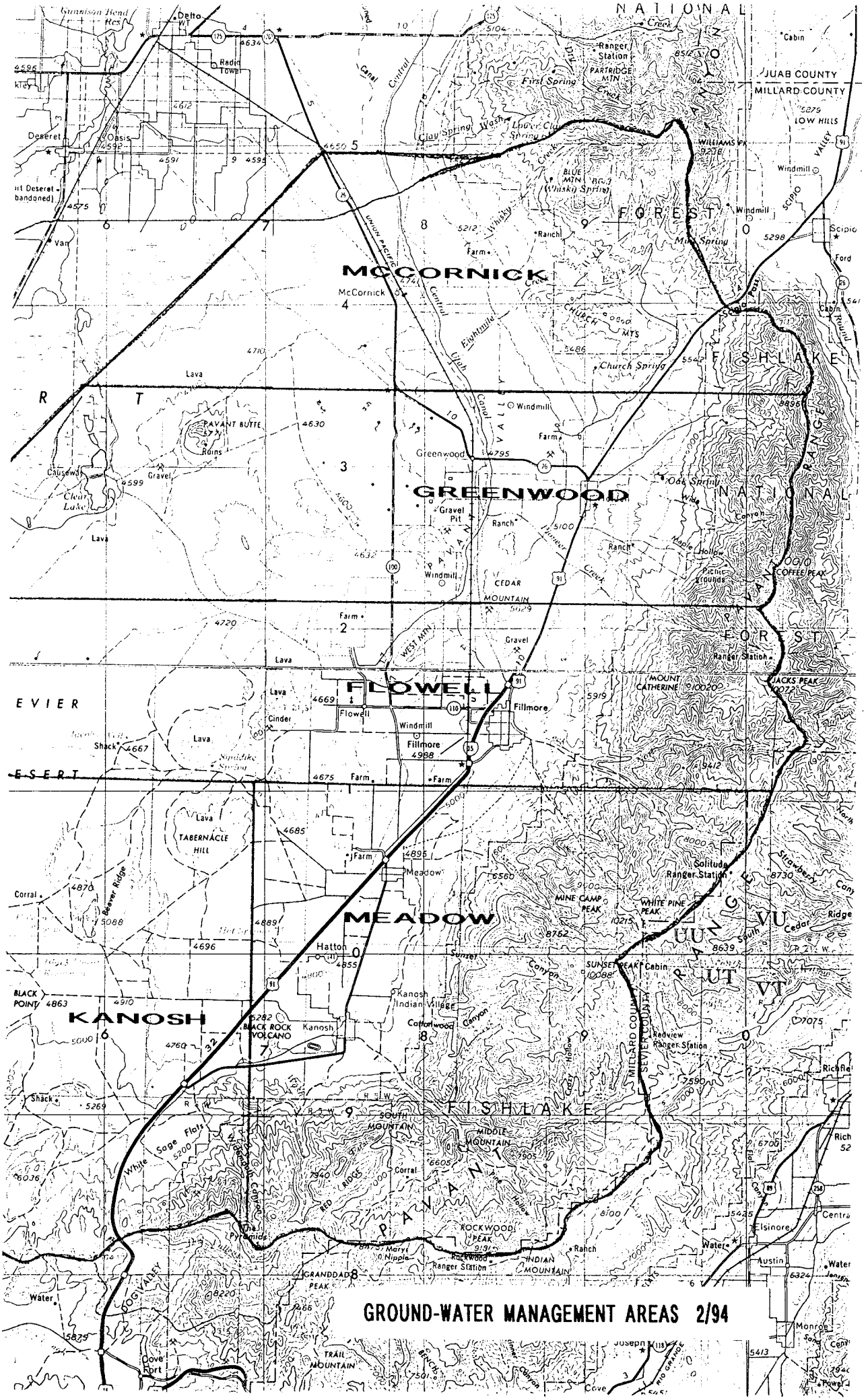
The Division of Water Rights developed a priority list of all perfected and approved ground-water rights of record in Pahvant Valley. In compiling this list the potential quantity of water that can be withdrawn annually (potential withdrawal) under the individual water rights was estimated. The total estimated potential withdrawals in the valley is about 150,000 acre-feet. In using the data from the priority listing a number of factors must be taken into account. For example, some of the rights shown may no longer be in use and the water use under many of the old underground water claims is not clearly defined. Another factor that needs to be considered is, the potential withdrawals are only that and the actual quantity of water diverted varies according to climatic conditions, irrigation method, type of crop grown, operational costs and many other factors. As a result, the potential withdrawals shown on the priority list do not reflect actual withdrawals under each right and caution must be used in the interpretation of the information. If withdrawals are limited to 60,000 acre-feet per year, it is not a correct assessment to accumulate the potential withdrawals and assume that all rights with a priority date later than this will be cut off.


MCCORNICK
GREENWOOD
FLOWELL
MEADOW
KANOSH
JUAB COUNTY
MILLARD COUNTY
NATIONAL FOREST
FISHLAKE NATIONAL FOREST
PAVANT RANGE
PAHVANT RANGE
SEVIER DESERT
Delta
Deseret
Oasis
Abandoned
Radio Tower
Canal
Central
Ranger Station
PARTRIDGE MTN
First Spring
Clay Spring
Lower Clay Spring
BLUE MTN (Whisky Spring)
Windmill
Scipio
Ranch
Farm
Church Spring
CHURCH MTS
Eightmile
Lava
PAVANT BUTTE
Ruins
Causeway
Gravel
Clear Lake
Greenwood
Gravel Pit
Oak Spring
Picnic Grounds
COFFEE PEAK
CEDAR MOUNTAIN
WEST MTN
Fillmore
Cinder
Shack
Tabernacle Hill
Meadow
Hatton
Kanosh Indian Village
Black Rock Volcano
Kanosh
Corral
Beaver Ridge
MINE CAMP PEAK
WHITE PINE PEAK
SUNSET PEAK
Solitude Ranger Station
Redview Ranger Station
MOUNT CATHERINE
JACKS PEAK
Sage Flats
SOUTH MOUNTAIN
MIDDLE MOUNTAIN
Pyramids
ROCKWOOD PEAK
INDIAN MOUNTAIN
Rockwood Ranger Station
GRANDDAD PEAK
DOG VALLEY
Cove Fort
TRAIL MOUNTAIN
Elsinore
Austin
Monroe
Joseph
GROUND-WATER MANAGEMENT AREAS 2/94